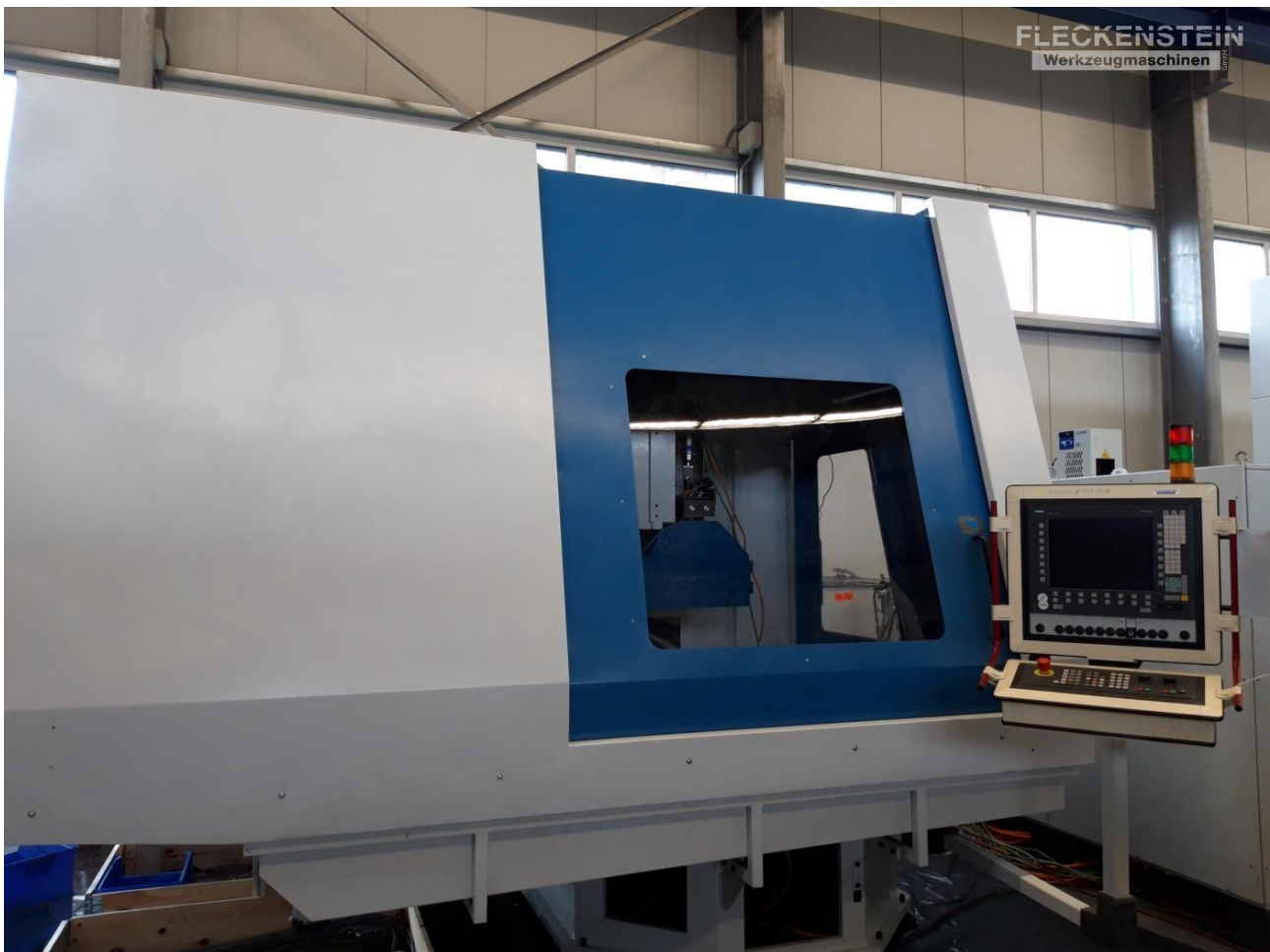


TECHNICAL DATA

CNC - ROTARY TABLE - SURFACE GRINDING MACHINE

Manufacturer	ABA
Type	MR 1500 ES
Control	SINUMERK 840 D
Built	2004



Grinding Area

Rotary table diameter	1.500 mm	
Distance table surface - grinding spindle centre	1.050 mm	max.
Vertical travel (Y axis)	880 mm	
Max height of workpiece	700 mm	with new grinding wheel
Max. workpiece load	ca. 1,500 kg	

Magnetic disk

Electro Permanent magnetic clamping plate	Ø 1.500 mm
Ring pole pitch	18 mm
Clamping force control	6-steps

Rotary table (B axis)

Rotary table with torque drive and measuring system make RÜCKLE Mod. PKTD6

Table speed	1 - 100 min ⁻¹
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Hydrostatic table bearing with separate hydrostatic unit make Winkelmann

Automatic vertical feed (Y axis)

Resolution	0,001 mm
Smallest feed size	0,001 mm
Measuring system	Encoders
Max. distance spindle centre - table	1.050 mm
Grinding head vertical travel	880 mm
Feed	1 – 3.500 mm/min

Electromechanical vertical movement by digital servo motor, backlash-free worm gear and ball screw. Preloaded precision roller guide
Central grease lubrication

Cross feed (Z axis)

Resolution	0,001 mm
Smallest feed size	0,001 mm
Measuring system	Encoders
Stand Cross travel max.	750 mm
Cross movement, continuous	5 – 1.500 mm/min

Electromechanical transverse movement by digital servo motor, toothed belt and ball screw drive.
Preloaded precision roller guide
Central grease lubrication

Grinding spindle head

Motor - Version	AC - motor adjustable	
power	44 kW	bei 1.500 – 3.000 min ⁻¹
Adjustable grinding spindle speed	50 – 3.000 min ⁻¹	
Spindle bearings	Axial and radial backlash-free	
Grinding wheel dimension max.	500 x 100 x 304,8 mm	
Grinding spindle in block design with roller bearings, preloaded high-precision spindle bearings and permanent grease lubrication, spindle axially and radially preloaded		
grinding wheel peripheral speed max.	35 m/s	
Grinding wheel balancing system Fa. MPM		

Control

SIEMENS SINUMERIK 840 D

With TFT colour monitor

MS-Windows user interface module PCU 50 with graphic user guidance

- With digital drives and integrated adaptation control
- CNC user memory 1.5 Mbyte for programs and data
- Main memory 256 Mbyte SDRAM
- Hard disk 40 GByte, of which 3 Gbyte are freely available for user programs
- MPI interface, USB V 1.1 (1 x external, 1 x internal), Ethernet 10/100 Mbit/s
- Floppy disk drive interface
- User-friendly manual grinding and automatic grinding sequences
- Digital position indicators with large colour screen
- Constant cutting speed control, error messages in clear text

Dressing unit

- Electric straight dresser for single grain diamonds.
- Electromechanical break-off movement and infeed.
- Compensation of the dressing amount with the Y-axis.

Coolant Equipment

Band filter system

Tank capacity	1.000 l
Capacity	200 l/min
Circulation pump	0,2 bar
Coolant pump 1	0,2 bar
Coolant pump 2	3,0 bar
Lifting pump tank	
Tank capacity	200 l
Feed pump	400 l/min

Installation data

Operating voltage	400 V
Frequency	50 Hz
Power consumption	130 kVA
Nominal current ca.	180 A
Backup fuse ca.	200 A
Space requirement l x b x h ca.	5,5 x 6,0 x 3,2 m
Weight ca.	15.000 kg

other equipment and accessories

- CNC - control SINUMERIK 840 D (modernized in 2011)
- All linear axes with digital servo motors and ball screw
- Rotary table make RÜCKLE in hydrostatic version with torque drive
- Y-axis (vertical) raised by 200 mm
- Grinding spindle drive with 44 kW
- Electrical straight dresser (completely overhauled)
- Band filter system with paper band filter, tank capacity 1,000 l, coolant pump 200 l/min/3 bar
- Full coverage of the working area
- Generously dimensioned workspace door
- Electro-permanent magnetic plate Ø 1,500 mm, ring pole pitch 18 mm
- Automatic grinding wheel balancer MPM
- Complete guarding of the work area with solenoid interlock in automatic mode
- Portable electronic handwheel in automatic and manual mode for all axes
- New Machine lamp in the workspace
- Electrical equipment 400V/50Hz
- Switch cabinet cooling unit
- New painting RAL 7035 (light grey), RAL 5007 (brillant blue)
- Rinsing gun with hose and holder in the operating area
- Extraction for grinding mist
- Machine is geometrically checked, new painted, bearings for grinding spindle renewed, all bellows renewed, various wear parts renewed